

STUDIO LIGHT

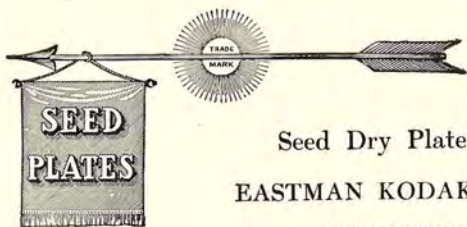
A MAGAZINE OF INFORMATION
FOR THE PROFESSION



PUBLISHED BY THE
EASTMAN KODAK COMPANY
ROCHESTER NEW YORK

DECEMBER 1917

It's a Seed 30 Gilt Edge Plate you need these days when speed is essential. It has the latitude, the gradation, the fineness of grain and the uniformity essential to the plate of ideal portrait quality.



All Dealers'.

Seed Dry Plate Division,
EASTMAN KODAK COMPANY,
ROCHESTER, N. Y.

Sell a good enlargement
from every soldier negative.

ARTURA CARBON BLACK

enlargements have the contact
print quality that makes the
selling easy.



ARTURA DIVISION,

EASTMAN KODAK CO.,

ROCHESTER, N. Y.

All Dealers'.



ARTURA PRINT, FROM AN EASTMAN PORTRAIT FILM NEGATIVE

*By Moffett Studio
Chicago, Ill.*



STUDIO LIGHT

— INCORPORATING —

THE ARISTO EAGLE .. THE ARTURA BULLETIN

ESTABLISHED 1901

ESTABLISHED 1906

Vol. 9

DECEMBER 1917

No. 10

THE BIG FILM ADVANTAGE

The progressive photographer must experiment, but his work is only that of proving up the claims of those who have done the real experimental work. He progresses because he does the minimum of experimenting, but he would get nowhere without at least trying out those things which seem to have advantages that may be of value to him in his work.

The users of Portrait Film are, for the most part, progressive photographers who have been quick to see the real value of the qualities claimed for film but sufficiently conservative to feel their way. That they have stuck to the use of film is conclusive proof that they have found it has brought them a step nearer the attainment of their ideals.

Month by month the sale of Eastman Portrait Film is increasing, in many instances is doub-

ling, and while the increased sales are gratifying they mean much more than advertising, demonstrating and selling. Every blow of the hammer that drives a nail also tests the material of which the nail is made. If it's a poor nail it will crumple up and have to be withdrawn. If it's a good nail every blow of the hammer drives it deeper and imbeds it more firmly.

Portrait Film has proved itself. Four years of faithful performance in the hands of a growing list of progressive photographers has established it as a staple.

No one need say "Let the other fellow do the experimenting." That stage has long since been passed. Film sales are the best proof of performance, and when these sales continue to climb there is a very good reason.

Film performance should be of interest to every user of glass plates, for if better results are possible, the man who wants them should know what part his

material plays in the quality of the result he secures.

Halation is the fault which has limited perfect reproduction. Halation is caused largely by reflections from the glass surface, very slightly by refraction within the emulsion itself. For the most part, therefore, it is the fault of the glass support and not of the emulsion. The reflection of light from the glass support can be overcome only in a measure and only at an additional expense in plate manufacturing.

The logical remedy for halation is the use of a support for the emulsion which, as nearly as possible, overcomes the defects of glass. As the extent of halation depends largely upon the thickness of the support, and this must be transparent, film is the logical and practical remedy.

Many photographers deny the existence of halation in their portrait negatives. This is because they have never seen a comparison between film and plate negatives. The film user enthuses over "that indescribable quality" he finds in film. He has been unable to see the halation in plates, but he *can* see the lack of it in the film result.

Masses of highlights without form are seldom natural and never to be desired, and form can not be produced without shade as well as light. Halation destroys the form of highlights, the texture of flesh, of delicate draper-

ies—in fact, destroys any impression that is made up of a number of fine points of light with intervening shadows. The finer the detail the more surely will it be destroyed, for the spread of every point of light is determined by the thickness of the glass plate, and the finer the points of light the more surely will halation overlap and destroy the intervening shadows.

True reproduction can not be secured where there is halation, but the more its effects are reduced the nearer will the result come to perfection. Film quality is superior because the most perfect emulsion that can be produced is coated upon a support so thin that it is practically free from halation.

Film negatives have the roundness, the brilliant crispness that one sees on the ground glass but so seldom gets in the finished print. Aside from these qualities Portrait Film has exceptional speed, fineness of grain and wide latitude. Its qualities are ideal for either studio or home portraiture, and the convenience of lightness, compactness, flexibility and ease of manipulation are very soon appreciated by the worker who is progressive and open to conviction.

Photographers who have given Eastman Portrait Film a thorough trial will tell you that the big advantages of film are "better results"—and convenience.

Eastman Portrait Albums

will sell at Christmas and after Christmas, if you have them in stock, show them, advertise them and talk them.

More portraits will be given at Christmas than ever before and more than ever before will the need of albums be felt.

Eastman Portrait Album circulars for distribution and album cuts for newspaper advertising are free for the asking. Connect up with our big magazine advertising—make album sales at a good profit and create a demand for photographs to fill them.



DISPLAYS THAT PAY

Window displays are probably more important during December than any other month of the twelve. The people who always come to you in December may come to you again, but there are a lot of people who seldom or never visit the photographer, but might, at this time, if the right sort of a display caught their eye and set them thinking of portraits of themselves.

Your display case is a fixture and if the pictures in it are not changed frequently they also become fixtures and fail to give the impression that things in your place are actually moving and new people are constantly being photographed.

More people shop in December than at any other time of year, more people are asking themselves the question "What shall I give?" and you have an opportunity to suggest an answer to that question the same as every other merchant in your town.

Pictures alone won't always do it, and the same pictures surely won't appeal to everyone alike. Then you will find that the same people will pass your display more often in December than in other months and they will look a second time if there is a new display to look at.

Window shopping is regularly practiced by those who have gifts to make and are looking for sug-

gestions. And there are a number of excellent arguments you can use this year. Neat cards, well lettered, should remind the shopper that the soldier boys in the camps or "somewhere in France" will want pictures from home—that from the standpoint of economy, photographs convey the thought of friendship without imposing an obligation. Your portrait adds the personal touch to Christmas greetings and enables you to maintain your Christmas customs without extravagance.

There has been so much thought of the welfare of our soldiers and those of our allies—so much self denial by those who are working for their comfort, that the line, "Keep on with your knitting—let us make your Christmas gifts," suggested by Mr. Garrett, will appeal to every Red Cross worker. Twelve portraits make twelve of the most appropriate gifts and relieve the giver of a lot of shopping worries.

There is an opportunity such as you have never had before to display and sell leather pocket cases to hold the photographs that are being sent to the soldier boys. And there should also be a demand for these same cases for the fathers or brothers of the soldiers.

If father has a boy in the Army or Navy a bill-fold or photograph case will be prized by him. Father is proud of his boy,

and though there may not seem to be so much sentiment on the surface, it is in that old heart of his, and the mere mention of his boy will bring it to the surface with a bound.

Change your displays more often in December than at any other time of year—use neat cards with good arguments for photographs as gifts—make a strong drive on Gift Certificates, which can be sold up to the last minute, and don't be afraid to price some of the styles of pictures you display. You can always add—other styles, sizes and prices are shown in the studio, and you might advise those who examine your display that they will be welcomed as visitors in your studio.

The display case is seldom used to the very best advantage, but it is just as important a factor in your advertising as the merchants' windows and should be given the same care and attention.

Don't forget that it is equally important at New Year's and Easter. A New Year's display should be ready and in place by the time you have to turn away orders for Christmas delivery. Business doesn't necessarily stop at Christmas unless you allow it to, and this of all seasons should be a busy one.

The display should work at night as well as during the day, for there are a lot of busy people



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who have no other time to examine the Christmas window displays. The cost of lighting will be small compared to the actual advertising value secured.



A GOOD SLOGAN

We received an excellent slogan for Christmas advertising, too late for publication in the November *STUDIO LIGHT*. The suggestion from E. G. Garrett, Oshkosh, Wis., is

"Keep on with your knitting—
let us make your Christmas Gifts."

The argument is good and especially timely since thousands upon thousands of women of our country are loyally devoting their time to the knitting of garments so necessary to the comfort of our allies and our own soldier boys in training camps and in the trenches of France.

The women who are most adept at such work are the ones who, in time of peace, ply their needles in making comfy little gifts for their friends. Why should they stop the more important work for the Red Cross to make their own Christmas Gifts, when they can have a sitting for photographs in a few minutes and the photographer can furnish them with as many gifts as they like?

Many women are so devoted

to the work that they knit at home, on the street, in the theatre or wherever they may be. To these, the slogan will have a strong appeal, but it will also interest others and suggest the ease with which the gift problem can be solved with photographs.

Mr. Garrett's suggestion would also fit in with the sale of Portrait Gift Certificates, even if it is a bit late for the actual making of sittings and delivery of work in time for Christmas.



Dry Mounting Advantages

*Dry mounting does not
cockle the thinnest mount,
holds the print perfectly
flat and permits you to
deliver prints immediately
after they are mounted.*

*Prints may be mounted
solid, tacked at the corners
or at one edge.*

*Have your dealer show
you the*

Kodak
Dry Mounting Press



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OUR ILLUSTRATIONS

An idea is just as big as a man makes it. Home portraiture is as old as photography, but until recently few photographers have used it as more than a means of photographing people who for some reason would not come to the studio.

Possibly it was someone without a studio who conceived the idea of making a business of home portraiture and saving the rent of a place of business. At any rate, photographers here and there who were not tied down by studio traditions made home portraiture a part of their work and encouraged such sittings. It has worked to the advantage of the studio photographer and has proved to his satisfaction that it does reach people who would not come to the studio to be photographed.

The Moffett Studio of Chicago was one of the first of many studios to develop home portraiture on a large scale. Chicago people from the start took kindly to the idea and were willing to be shown that good portraits could be made in their homes as satisfactorily as in a studio. It was but a short time until there was a big demand for Moffett home portraits.

The field seemed to be unlimited. There was a limit, however, to the men who were capable of doing such work. Most of them had to be trained before

they were able to bring their work up to the Moffett standards. It's one thing to make a home portrait business stand on its own feet under its own name, but it's quite another thing for a studio with a reputation for a high standard of work to maintain that standard for work done outside the studio.

The Moffett Studio has demonstrated that successful home portraiture depends upon the ability of the photographer to select the most favorable conditions of light, background and accessories found in the home, to know perfectly the possibilities of the material with which he is working and to exhaust his picture possibilities before he counts his work finished.

The last may necessitate the making of a number of negatives, but it almost always results in large orders and obviates making sittings over, which are much more expensive than in studio work.

No expense is spared. Operators are selected for their special ability and are given a thorough trial before they are allowed to make sittings in the home. At the beginning, the greatest drawback to the work was the necessity of using glass plates. When it was learned that Portrait Film was soon to be placed on the market, the big film advantages of convenience were at once seen and appreciated. Film was or-



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dered, tried out, proved satisfactory, and was adopted for home portraiture. Convenience seemed the big film advantage, but when it had been thoroughly tried out its quality was so apparent that it was also adopted for studio work.

Aside from home portraiture the business of the Moffett Studio is large and of a very high class. Its success is due to its very able management, and the high standards this management insists on upholding, in its service, salesmanship and the quality of the work produced.

Our illustrations are from the regular run of work produced by this studio and show the adaptability of film for all classes of portrait work.



*If you want a plate for
speed work or for use on
dull days, the*

SEED GRAFLEX

*will give you extreme
speed with the most per-
fect gradation ever se-
cured on a fast plate.*



STAINS ON NEGATIVES AND PRINTS

THEIR CAUSE AND THEIR CURE

Stains may be due to several causes, and vary accordingly in their nature and color. Thus, we may have red or blue ink stains, iron stains, pyro and iron stains, silver and dichroic fog stains, oxidation stains and others less common. Since yellow stains are most frequently met with, we will deal with them first.

The two commonest yellow stains in photography are oxidation and silver stains. Oxidation stains are caused by oxidation of the developer by oxygen from the air. Thus we may have Elon, Pyro, Hydrochinon and other developer stains, which may be either local or general.

Local stains are the result of careless handling of the negative or print, being caused by incomplete immersion in the developing- or fixing-solutions. A slight curl of a film or print, a negative not entirely covered, or too many prints in one tray, will leave some part of the surface exposed to the air, oxidation will take place and a yellow patch will appear the size of the portion of negative or print exposed to the air.

The necessity of completely submerging the plates, films or prints in the solutions is obvious, and after being placed in the



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fixing-bath they should be moved about. A precaution that is a great trouble-saver is the use of an acid stop-bath between developing and fixing. The effect of this is to neutralize or destroy the effect of the alkali in the developer that is carried over in the negative, thus reducing the tendency of the developer to oxidize.

There is also a danger that if the acid fixing-bath becomes neutralized through the carrying over of alkali from the developer, stains may be produced. It is therefore a wise precaution to add further amounts of hardener to the fixing-bath at intervals, to make sure that it remains acid.

Local yellow stains produced in this way act just as if pieces of yellow filter were placed over the negative, and the print produced will be weaker in those places where the stain is present, hence the necessity of avoiding or removing it.

General oxidation stain extends over the entire surface of the negative or print, and is caused by the use of an old or discolored developer, or by a developer not containing a sufficient amount of sulphite. Pyro will give this stain, especially if the solution has been allowed to stand for any considerable time before use. In cases where the general stain is uniform it will have no other effect than to prolong the printing-time of the negative.

In the case of a pyro-developed negative, in addition to the slight general yellow stain above, there is usually a yellow stain image present along with the silver image, the presence of which may be revealed by removing the silver image in a bath of Farmer's reducer. This image is an oxidation product of the developer produced in those places where the metallic silver is formed during development. This oxidation stain has the effect of increasing the contrast of the negative, and explains the fact that a thin-looking pyro-developed negative will often give a contrasty print.

The other common stain that is likely to occur is silver stain. It is difficult to distinguish this from oxidation stain by ordinary observation. Like the latter, it can be either local or general, and it arises from one or several of the following causes:

(a) The first cause is the use of an old and exhausted fixing-bath, containing an undue amount of silver in solution. If the negative or print is not sufficiently washed, some of the silver salt remains. This is colorless, but is changed to yellow silver sulphide after some time. This first cause is easily prevented.

(b) Incomplete Fixing. This can occur even with a new bath if the print or negative is taken from the bath too soon. While the plate is fixing, the silver

halide in the emulsion changes first to colorless silver thiosulphate, which is comparatively insoluble. At this point the milkiness of the plate or film disappears. By leaving the plate in the bath this soluble and colorless compound is changed to a more soluble double thiosulphate of silver, which can be easily washed out. When the film is removed from the fixing-bath immediately after the milkiness has disappeared—the first stage of fixing—no amount of washing, later, will remove the insoluble silver salt, and this will in time be changed to yellow silver sulphide stain. The only safe rule is to leave all prints and negatives in the fixing-bath for double the time required to reach the end of the first stage, which is marked by the disappearance of the milkiness.

(c) If prints or negatives have not been completely covered while in the fixing-bath, they may appear completely fixed; but in spots they may have fixed only as far as the first stage, with the result that on exposure to the air yellow stains will appear.

Local silver stains may be caused by leaving a negative in contact with damp gelatine proof paper. This paper contains a soluble silver salt which is more or less absorbed by the negative and produces the stain.

When using printing-out paper care should be taken to see that

the paper and the negative are perfectly dry. When there is a possibility of the negative and paper being in contact over night, owing to failing light, a sheet of Kodaloid should be placed between them before exposing.

As previously stated, it is difficult to detect slight silver stain in the presence of oxidation stain by observation. While a stain may be either pure silver stain or pure oxidation stain, it is more likely to be a combination of the two.

From the above it is evident, therefore, that yellow stain may consist of one or more of the following compounds:

Metallic silver, silver sulphide, silver thiosulphate, silver photohalide, together with an oxidation product of the developer.

REMOVAL OF YELLOW STAIN

There are two methods of removing the stain—(a) chemically, (b) photographically.

Oxidation stain may be removed by bleaching the silver image to silver chloride, and redeveloping, this process, incidentally, removing the stain. In the case of both negatives and prints, it is a wise precaution first to harden them in a 5 per cent. solution of formalin, and wash, otherwise the gelatine is apt to soften and frill during the treatment. The permanganate bleach is made up of the following two stock-solutions:

A

Potass. permanganate	<i>Avoirdupois</i> 64 grains
Water	32 ounces

B

Sodium chloride (table salt)	5½ ounces
Sulphuric acid (strong)	1 ounce 160 grains
Water	32 ounces

For use, take two parts of water and one part of B, and to this add one part of A.

A point that must be observed in the mixing of the solutions is that the stock-solution A *must be added* to the diluted B solution, that is, one part of A must be added to the combined two parts of water and one part of B. If the stock-solutions are mixed before B is diluted, chlorine gas will be given off. When the solutions are mixed as directed, chlorine gas is not liberated, but remains in solution and converts the silver image into silver chloride, which is wanted.

The solutions A and B keep well if kept separately, but not when mixed, and for this reason the bleaching-bath should be prepared as required.

When preparing the solution A, be sure that no particles of undissolved potassium permanganate remain, or they will give trouble in the way of spots and blemishes in the negative.

The bleaching should be complete in about three or four minutes, after which the negative

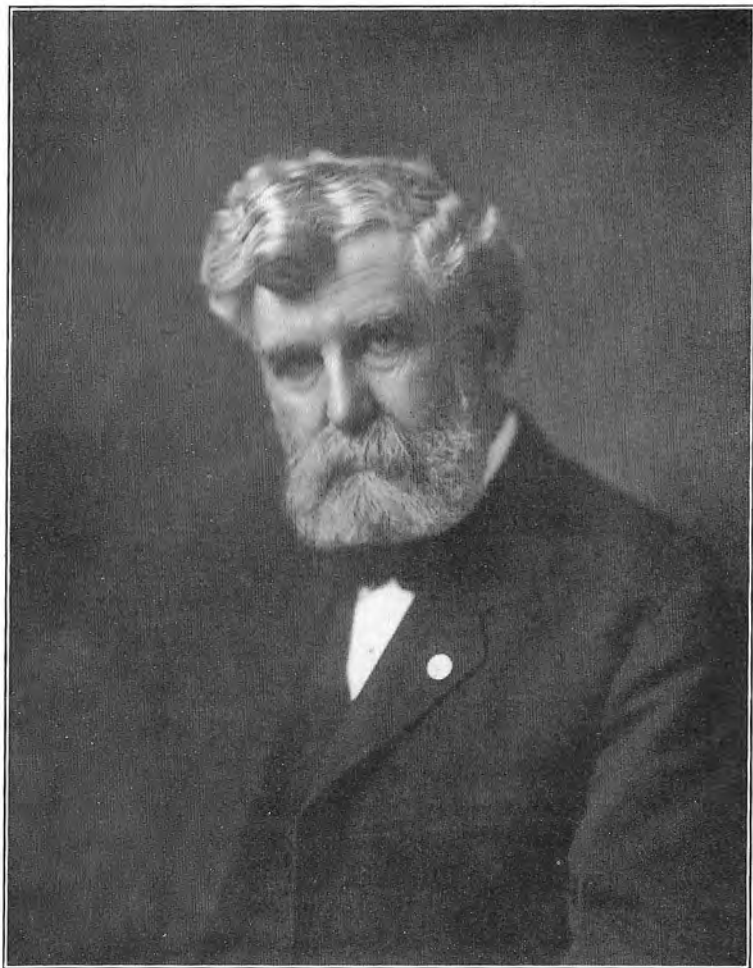
should be rinsed and put into a weak solution of sodium bisulphite, rinsed and developed in a *strong light* (daylight, if possible) with an ordinary developer, say Nepera solution one part, water four parts.

In the case of a pyro-developed negative, the image of which consists partly of a silver and partly of a pyro stain image, the above process removes the stain image entirely, leaving a pure silver image, the process therefore being equivalent to reduction. By using a weak pyro re-developer, much of the original stain image may be re-formed, though, incidentally, considerable general yellow stain is produced at the same time.

SILVER STAINS

If silver stain is treated as above, it will not be removed, but will be changed to metallic silver, and a black deposit will take the place of the yellow stain.

When a negative or print is stained, and it is decided to attempt its removal, it is a good plan to find out by a preliminary test just what particular variety of stain you have to deal with. This is done by cutting a narrow strip from the edge of the stained paper or film, and bleaching and redeveloping as described above. If the stain is removed entirely, it is pure oxidation stain, but if is replaced by a black deposit, it



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consists more or less of pure silver.

Whenever silver stain is present, it is a much safer and better plan to remove it photographically.

The following method of removing stains by means of color-sensitive plates and light filters was published in *STUDIO LIGHT*, February, 1917.

"This special use we have in mind for a panchromatic plate and contrast-filter is for reproducing valuable negatives that have become so badly stained that they are useless for printing.

"Negatives become stained in various ways, and sometimes these stains cannot be removed by a chemical treatment without injuring the silver image. It is useless to try to print from them, but it is a very simple matter to reproduce them, provided the chemical that made the stain has not removed a portion of the silver image, and this is not often the case.

"A positive made by contact through the strong Wratten 'G' filter on a panchromatic plate will show no trace of the yellow stain. It is then a simple matter to make a negative on a Seed 23 plate from the positive, by contact, if the positive is of the desired size.

"Filter-film is not expensive, but care should be used in handling it. It is stained gelatine

stripped from the glass-support on which it was coated, and without a support it must be kept absolutely dry to retain its form.

"On the other hand, an enlarged, reduced or full-sized positive may be made in the enlarging or reducing camera, in which case a piece of filter, only slightly larger than the diameter of the lens, will be required."

Apart from yellow stains, we may have brown iron-rust stains, or bluish stains caused by the action of pyro on such iron stains, though these are usually removed during the bleaching- and developing-process above, as are likewise stains due to most aniline dyes, and red and black writing-inks. In the case of some samples of red ink, a slight trace of stain will remain after such treatment, in which case its effect may be removed photographically.

Although the previous article in *STUDIO LIGHT* makes particular reference to the "G" filter for removing yellow stain, any colored stain may be dealt with in a similar manner by a suitable choice of filters, so that on viewing the stained negative or print through the filter, the stain becomes invisible.

Another form of stain, rarely met with, is dichroic fog, which appears yellowish green on looking at the surface of the film, but pink when looking through the negative. This stain consists of particles of colloidal silver, and is

caused by underexposure and forced development of rapid plates or film with a developer containing hypo, ammonia or an excess of alkali or sulphite, that is, a solvent of silver bromide, or the use of a weak fixing-bath or one containing an excess of developer.

Anything which tends to increase the solubility of the silver bromide in the developer, such as an increase in temperature, tends to increase the amount of fog likewise. The stain may be removed by an application of a weak solution of Farmer's reducer, or a dilute solution of potassium permanganate with the addition of a few drops of sulphuric acid. This will be effective only if the stain is more readily attacked than the silver image, so that if the stain is of long standing, the slight reduction of the negative is apt to take place.

While oxidation stain is being removed by the above bleaching- and redeveloping-process, any drying-marks left on the film or plate, caused by too rapid drying, will disappear also.

Another advantage in the use of the bleaching- and redeveloping-method is that it affords an opportunity for intensification and reduction. If the negative from which we wish to remove stain is weak and thin, we can, in the redeveloping-stage of the stain-removing process, redevelop with

a solution of sodium sulphide. If, on the other hand, the negative is too dense, by cutting down the time of redevelopment and subsequently fixing we can effect any degree of reduction. In this way we can make two improvements to our negative by the one operation, and if the negative happened to have any of the other stains mentioned above, we accomplish several improvements with one effort. The above methods of stain-removal may be applied to the removal of stains from sulphided prints also.



TOZOL

The Complete Developer

Requires the addition of no developing agent. It's right just as it is, and is prepared exactly as it was before the war.

Your dealer can supply you.



PUT SYSTEM IN YOUR BUSINESS

The more business you do—the more money you make—the more you need system in your studio. System should be looked upon as an accelerator of business—a pacemaker that keeps you at your best pace and gets the most out of you with the least waste of energy.

The most prosperous business without system is continually cheating itself of one of the greatest helps to any business, and that is, honest criticism. If there is some little thing wrong with your business a system sheds light on it, not gloom. If there is a loose cog in your business machine that slips, system will find it and enable you to tighten it up.

Just because you are prosperous and happy, don't imagine system is going to take the joy out of life. It's going to make you more happy and prosperous and energetic and no one need fear it except the slacker or waster who does your business harm.

If you wish to quote a price on a big job of work and allow yourself a certain per cent. of profit you can only do it by knowing your expense and cost of production. If you lose a contract because your price is too high it is much better than find-

ing out you have lost money when the work is finished.

The successful business man is a success because he knows definitely every cost and sells at a certain profit. The successful photographer often owes his success to his ability as a workman, his personality and a good volume of business at a good, fair profit. A good business man might capitalize the photographer's ability and personality, pay him a salary equal to the money he would make as his own boss, and still make good interest on his investment, simply by the economy made possible by the use of system.

System is the ground-glass of business. It enables you to focus every little detail of your business with accurate sharpness, but it doesn't change anything. It merely enables you to see what otherwise you could only guess.

You can imagine how successful you would be if you made negatives by guess without ever looking on your ground-glass—yet that is the way many a photographer sets the prices for which his work is to sell.

The photographer guesses pretty well and usually manages to make a good profit, but he would often make a better one, and at least a more uniform one, by the aid of a system of accounting and cost finding.

There are many cases of successful photographers who have



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found that all their profits have been made on certain lines of work, while other work has been done at cost or even at a loss. System revealed this fact and enabled greater energy to be expended on the work which was bearing the expense, with the result that all work which was not profitable was soon eliminated and profits immediately jumped because all work was made equally profitable.

System for the Photographic Studio was worked out by experts in accounting with the idea of giving the photographer as simple a means of bookkeeping as could be devised. It is flexible enough to meet the needs of any studio, but does not require the services of an expert accountant to keep the books straight.

By this system every item of studio expense is very simply recorded under its proper heading so that total expenses for permanent equipment, for materials, for wages or for general expenses can quickly be determined for any week or month or year and compared with totals of cash received. The actual condition of your business is known at all times—your profits can not be over-estimated or your expenses under-estimated. Your cost of materials covering any given period is seen at a glance and the cost of converting material into finished work will often open your eyes.

With such a system, leaks are readily found, waste is stopped, imaginary profits dwindle and real profits can be made to take their place. If you do not have a satisfactory system of records and books for handling your business there is no better time than the first of the year or the first of February or March to take an inventory and place your studio on a sound business footing.

A booklet, "System for the Photographic Studio," explains the method thoroughly, and this may be had from your dealer without charge. If you use the Eastman Studio Card Register System, a few Shop Tickets, Follow-up Cards and the Eastman Studio Cash Book will complete your outfit and enable you to know more about your business and to conduct it with more profit than is possible without good bookkeeping.

The price of the Studio Card Register System complete is \$5.00; Studio Shop Tickets, per hundred, 25 cents; Follow-up Cards, per hundred, 60 cents; and the Eastman Studio Cash Book, containing 161 pages and including instructions for use, \$4.00. At your dealer's.



*The most light with the
greatest safety—*

Kodak Safelight Lamps

Your portrait
for
your soldier

*Make the
appointment
to-day*

THE
PYRO STUDIO



Line cut No. 247. Price, 30 cents.

THE ONLY CONDITION

We make but one condition in our offer of cuts for the use of photographers.

It is obvious that two photographers in the same town would not care to use the same cut, and we are therefore obliged to limit this offer to one photographer in a town. It will be a case of first come first

served. The first order from a city will be promptly filled. Succeeding orders (if any) will necessarily be turned down and the remittance, of course, will be returned. It is also obvious that we cannot, on account of the cost of the drawings, furnish any large variety of cuts at the nominal prices quoted, and therefore can offer no substitute cut. Get your order in *first*. E. K. CO.

ENLIST YOUR LENS IN THE ARMY

The people are asked to help the Signal Corps of the Army get lenses enough for cameras for the fleet of observation airplanes now being built. The need is immediate and of great importance. The lens is the eye of the Army.

The situation is that, American manufacturers are not yet in a position to meet the sudden demand for special lenses for aerial service. Possessors of the required types are, therefore, urged to do their bit by enlisting their lenses in the service of the Army. They are asked to immediately notify the Photographic Division of the Signal Corps, U. S. A., Mills Building Annex, Washington, D. C., of lenses of the following descriptions which they are willing to sell, stating price asked:

Tessar Anastigmat Lenses made by Carl Zeiss, Jena, of a working aperture of F. 3.5 or F. 4.5, from $8\frac{1}{4}$ to 20 inch focal length.

Bausch & Lomb Zeiss Tessars, F. 4.5, from $8\frac{1}{2}$ to 20 inch focal length.

Voigtlander Heliar Anastigmat Lenses, F. 4.5, $8\frac{1}{4}$ to 24 inch focal length.

Practically all of the lenses of these types in America will be required, but the $8\frac{1}{4}$ inch lenses are most urgently needed.

8, 9, 12 and 14 inch condensers are wanted; also a number of Bausch & Lomb Zeiss Protars VII A No. 13, preferably set in Volute shutters.

(It is requested that the press and individuals giving publicity to the above give the specifications of the lenses desired accurately. This will avoid the labor and delay of unnecessary correspondence with people offering lenses that are unsuitable.)

Two methods of dark room illumination that you can be sure are safe.

Kodak Safelight Lamp



By employing reflected light which shines through a Wratten Safelight, the greatest volume of illumination that can be used with safety is secured. You have a safe light *and yet there's more of it.*

Interior of lamp is enameled a brilliant white to intensify light reflection.

Kodak Safelight Lamp supplied with safelight and four feet of electric light cord with plug . . . \$3.00



Brownie Safelight Lamp

This lamp is admirably adapted to plate or film changing. Screwed into the ordinary electric light socket, in the wall or on a cord, the Brownie Safelight Lamp instantly provides a means of safe illumination. Both safelights, the circular one at the end and the rectangular one at the side, are removable.

Brownie Safelight Lamp \$1.00

EASTMAN KODAK COMPANY,

All Dealers'.

ROCHESTER, N. Y.



Eastman Studio Scale

A practical and accurate avoirdupois scale specially designed for the convenience of the professional photographer.

The beam with the sliding weight is the feature which eliminates the use of small loose weights and simplifies the working of this scale. The large weights are carefully tested and marked in grains as well as ounces or fractions of ounces. The large weights which most nearly make up the amount of chemicals wanted are placed in the right hand pan and the weight on the beam is slid to the right to make up the exact amount. The scale is made of the best materials—all bearings are of hardened steel, the beam is black with white markings, all other parts being nickeled.

THE PRICE

Eastman Studio Scale \$3.50

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KODALAK WP

FOR WATER-PROOFING PRINTS

Make your pictures for the soldiers doubly durable with a coating of Kodalak WP.

The print dipped in Kodalak WP is given a thin, flexible, transparent, water-proof coating. This coating not only protects the print from moisture but permits of its being cleaned with water.

Water-proofing will be found an advantage in any case where prints may be exposed to the weather or where they receive much handling and are likely to become soiled.

Kodalak WP gives a pleasing lustre to dull surfaced prints with an added transparency to the shadows. Sixteen ounces of Kodalak WP will water-proof about one-half gross of 4 x 6 prints or their equivalent.

Kodalak WP, 16 oz. bottle . . . \$1.00

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Strength and purity maintained at a uniform standard is the result of constant, careful testing of the chemicals bearing this seal. They are right for your use.



*Specify E. K. Co. Tested and
be sure of results.*

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The obvious way to make business is to create a demand for what you have to sell—photographs.



Eastman Portrait Albums

create a demand by supplying a practical, substantial and convenient means of caring for portraits as they should be cared for. They are adaptable to 87% of the sizes of portraits now made by photographers.

The more albums you sell, the more photographs you will sell to fill them.

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Get the soldier groups.



Eastman View Camera No. 2

7 x 11

Narrower than 8x10, but longer, the proportions of the 7x11 are especially suited to either vertical or horizontal subjects. It is a size that fits the group picture, landscape or architectural subject equally well.

A picture of these proportions is suitable for a greater number of subjects than any of the present standard sizes, none of which parallel it. You must see a 7x11 print or mark out a 7x11 rectangle to get an idea of how suitable it is for groups, landscapes and architectural subjects.

The Eastman View Camera No. 2 is the improved model of Empire State and Century View, and is fitted with every practical convenience that our manufacturing experience has been able to suggest.

The new 7x11 size has a swing of unusual latitude and an especially large front board ($13\frac{1}{2} \times 6\frac{1}{4}$ inches) with sliding arrangement permitting the lens to be centered on either half of the plate when making two exposures on the plate.

THE PRICE

Eastman View Camera No. 2, 7x11, with case and one
Portrait Film or Plate Holder \$45.00

EASTMAN KODAK COMPANY,

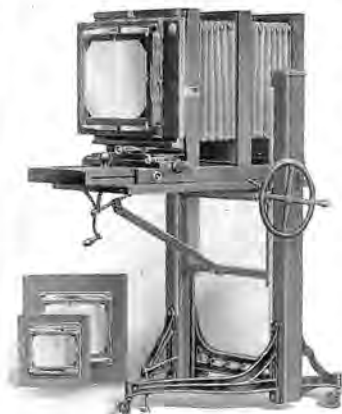
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*The rapidity, smoothness, and precision afforded
in the operation of*

Century Studio Apparatus

are valuable requisites in every progressive studio.



Portrait film or Plates may be used in the Double View Holders which fit the 11 x 14, 8 x 10, or 5 x 7 reversible, spring actuated Ground Glass Adapter Backs, interchangeably attached to the sliding carriage.

The operator can make full sized negatives, or by the use of diaphragms and lateral movement of the sliding carriage, two 7 x 11 negatives on the same plate with the 11 x 14 back, or two 5 x 8 negatives with the 8 x 10 back.

The platform of the Semi-Centennial Stand, with camera in position, can be quickly and easily elevated to a height of 49 inches, or lowered to within 14 inches of the floor, and locked in any desirable position.

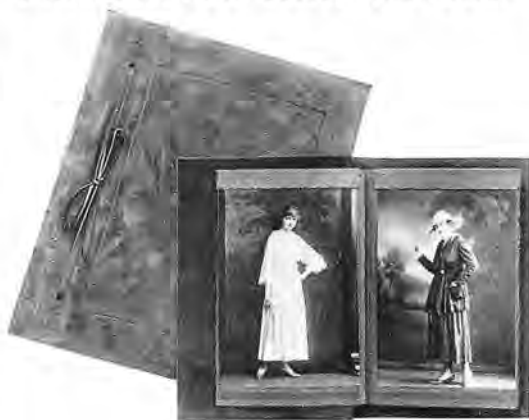
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CENTURY CAMERA DEPARTMENT

EASTMAN KODAK COMPANY

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THE CLASS PORTRAIT AND GROUP ALBUM

Is made on the arts and crafts order—rich looking—cover is of the highest grade of brown suede leather. Made in three sizes—loose leaf style—capacity from two to fifty 4x6, 5x8 and 8x10 portraits.

For the *individually* posed combination group of Student Classes it is the most profitable style you can use. While it looks exceptional value the *cost of the album is in most cases less than if mounts are used.*

You ought to know more about it—we know you are busy right now with Christmas work—but the School Portrait Work Season is awaiting just around the corner, so better drop us a postal to-day and say "More information on this Album," and we will send a complete selling plan for this profitable style.

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appeals to those who have not used it because of its convenience, lightness, compactness and flexibility.

Those who have used Portrait Film stick to its use because of its quality.

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